IN THE CLAIMS

Please amend the claims as follows:

1. (original) An X-ray examination apparatus (1) comprising:

- a controllable X-ray source (1c) arranged to generate an X-ray beam (1f);
- an X-ray detector (1d) arranged to produce a first image upon an interception of the X-ray beam (1f);
- image processing means (3) arranged to process at least a part of the first image with a grey-level compression function (3a) in order to compress the first image into a second image;
- control means (6) arranged to compute an average grey value of pixels of the second image and to provide a dose control signal (C) to the X-ray source (1c) in order to control the X-ray beam (1f) , the dose control signal (C) being determined from a comparison between the computed average grey level value and a pre-stored reference value (CA).

2. (original) An apparatus according to Claim 1, wherein the grey level compression function (CC) comprises a plurality of compression ranges with substantially different grey level compression factors.

3. (original) An X-ray apparatus according to Claim 2, wherein the grey-level compression function (CC) comprises a monotonous function with a first linear range (I), a second linear range (II) and a third linear range (III), the second linear range comprising the pre-stored reference value (CA), the grey level compression factor of the second linear interval (II) having substantially a value of one, grey level compression factors of the first linear range (I) and the third linear range (III) being substantially lower than one.

4. (original) An X-ray apparatus according to Claim 3, wherein said apparatus further comprises computing means (8) arranged to construct a grey-level histogram of the first image and to determine corresponding boundaries of the first linear range, the second linear range and the third linear range from said grey-level histogram.

5. (currently amended) An X-ray apparatus according to ~~Claims 3 or 4~~claim 3, wherein said computing means (8) is further arranged to calculate a loop gain correction factor and to apply the loop gain correction factor to the dose control signal.

6. (original) A method of controlling an output of an X-ray source of an X-ray examination apparatus by means of a dose control signal, said method comprising the steps of:

- acquiring a first X-ray image;
- processing at least a part of the first X-ray image with a grey-level compression function in order to compress the first X-ray image into a second X-ray image;
- computing an average grey level value of pixels of the second X-ray image;
- comparing the computed average value and a pre-stored reference value;
- providing a dose control signal to the X-ray source, said dose control signal being determined from said comparison.

7. (original) A method according to Claim 6, wherein for the grey level compression function a function with a plurality of compression ranges is selected, wherein consecutive compression ranges have a substantially different grey level compression factors.

8. (original) A method according to Claim 7, wherein for the grey-level compression function a monotonous function with a first linear range, a second linear range and a third linear range is

selected, the second linear range comprising the pre-stored reference value, the grey level compression factor of the second linear range having substantially a value of one, grey level compression factors of the first linear range and the third linear range being substantially lower than one.

9. (original) A method according to Claim 8, wherein said method further comprises the steps of:

- constructing a grey-level histogram of the first image;
- determining corresponding boundaries of the first linear range, the second linear range and the third linear range from said grey-level histogram.

10. (currently amended) A method according to ~~Claims 8 or 9~~claim 8, wherein the method further comprises the steps of:

- calculating a loop gain correction factor;
- applying the loop gain correction factor to the dose control signal.